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## **PHD thesis summary: The many faces of rational choice theory**

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**PHD THESIS SUMMARY:**  
**The many faces of rational choice theory**

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*PhD in history and philosophy of economics, April 2013*

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In recent decades the epistemic potential of ‘rational choice theory’ has been profoundly questioned. Skepticism towards economic man and his ‘imperialistic attitude’ has been advocated by behavioral economists, psychologists, and philosophers for several decades now. Not only does the rejection of rational choice theory appear to follow from our common sense. With the breakthrough of behavioral economics, rational choice theory has also become challenged on empirical grounds. Although these critiques may appear to be *prima facie* justified, it is significant that many appraisals of rational choice theory are conducted independently from the actual context in which the theory is applied. This often results in an underestimation of the pragmatic usefulness of rational choice theory in the context of different scientific practices. My dissertation points to the weaknesses inherent in context-independent appraisal. The overarching goal is to seek a comprehensive understanding of ‘rational choice theory’ against the backdrop of actual economic practices. This, I believe, will serve as strong basis for more nuanced appraisal of the theory.

In chapter 1, I show that there exists fundamental confusion in the philosophical and social scientific literature about what rational choice theory is. This originates in the fact that ‘rational choice theory’ has many faces. These faces are conceptually and methodologically distinct in contemporary economics and have been applied to strikingly disparate problems. They have, however, never been distinguished from one another. Furthermore, many appraisals rest upon the unsupported premise that rational choice theory is used as a psychological theory of human behavior (see Hausman 1995; Satz and Ferejohn 1994). My dissertation offers an account of rational choice theory that is more sensitive towards actual practices and runs contrary to this ‘received view’. I suggest that the various manifestations of rational choice theory could be better understood as a family of theoretical approaches, which

can be subsumed under the heading of 'rational choice analysis'. They each constitute an account of human agency that is based upon some version of individual rationality, but they differ fundamentally in how rationality is interpreted and conceptualized. So far, this diversity of rational choice analysis has not been well understood. Yet, failure to recognize the existence and nature of these many faces has ensured that they are appraised in isolation from the problems for which they were designed in the first place to solve. I suggest that such isolation can often result in misdirected critique.

I argue further that developing a framework for appraisal that takes the various pragmatic contexts of rational choice explanations into account requires tracing the historical emergence of rational choice analysis. This is because contemporary rational choice explanations are rooted in different intellectual traditions and have emerged from earlier attempts to conceptualize the behavior of human agents within specific problem-contexts. To capture the variety of different historical backgrounds for rational choice explanations, I take an approach that is used in historical epistemology, namely 'case study analysis'. Case study analysis suggests itself when what I call the 'method of local critique' is used as a method of appraisal. This is the approach that implicitly underlies Philip Kitcher's work in philosophy of biology (see, e.g., Kitcher 2003). In my dissertation, I use both approaches to appraise the different faces of rational choice against the backdrop of their history.

In chapters 2 to 4, I show that the history of rational choice analysis reveals a four-fold shift that is related to economists' changing conceptualizations of individual behavior and the problems they address. First, the concept of rationality has become considerably narrower in comparison with its intellectual precursors, such as the theories of practical reason and rational behavior variously developed by Aristotle, Daniel Bernoulli, Thomas Hobbes, and David Hume. Second, following the Marginalist revolution, the focus of economic analysis shifted from understanding the sources of wealth and the functioning of markets towards extracting the logic of choice that underlies individual behavior. This shift is reflected in the changes of the methodological status that rational choice approaches occupied, away from W. S. Jevons's crude principles of utility towards Max Weber's ideal types and Ludwig von Mises's praxeology. It went hand in hand with the different justifications for re-conceptualizing human agency, namely allowing economists to better address the distinct problems

economists were respectively concerned with. Third, from the 1940s onwards, rationality became formulated axiomatically, allowing rational choice analysis to be employed as a highly flexible ‘toolbox’, applicable, with appropriate specifications, to a range of problems beyond the traditional scope of economics. The long-standing separation of human rationality and human psychology in much economic thought reached its apogee in Gérard Debreu’s *Theory of value* published in 1959. Finally, in parallel with the introduction of the axiomatic choice method to economics, a fourth shift occurred that constituted an attempt to unify the social sciences by addressing social scientific problems beyond the traditional realm of the market. This shift is particularly pronounced in Gary Becker’s *Economic account of human behavior* (1976) and the tradition of Chicago price theory. These four shifts reveal that none of the conceptually distinct manifestations of rational choice analysis was ever primarily intended as a psychological theory of human behavior.

In chapter 5, I outline some implications of these findings with respect to the potential and limitations of rational choice analysis, and for the often-voiced claim that economics requires a descriptively adequate (psychological or even neural) theory of human behavior. Given that economists address problems characterized by complexity, they can frequently provide only what F. A. von Hayek (1955) called ‘explanations of the principle’. In those cases, explaining individual behavior on the neurological, psychological or behavioral level does not necessarily facilitate better comprehension of phenomena occurring at the institutional or macro-level.

Furthermore, I argue that on the three predominant interpretations of rationality in economics (i.e., consistency, maximization, self-interest), rational choice analysis cannot accommodate what I call the ‘normative dimension of agency’ and what Amartya Sen (1977) has termed ‘acting from commitment’. On all three interpretations, rationality is understood as ‘instrumental rationality’ in the Humean tradition. As such, rational choice analysis finds itself in stark contrast with the Kantian tradition and the idea of moral agency as being essential and constitutive of rationality. It is the Kantian understanding of rationality, however, that characterizes Sen’s concept of commitment. The difficulty in accounting for committed behavior—understood in a Kantian sense as acting from duty—with a theoretical framework that relies upon an instrumental understanding of rational action reveals a fundamental weakness of rational choice analysis, but only when it is

depicted as a universal theory of human behavior and appraised from a realist perspective. By analyzing Cristina Bicchieri's (2006) account for norm-conformity, I conclude that recent attempts by behavioral economists to accommodate pro-social behavior within an axiomatic choice framework are themselves questionable.

In a final discussion of the main findings of my thesis, I argue that conventional meta-narratives formulated in Lakatosian or Kuhnian terms are inadequate either as an interpretation of the conceptual history developed in chapters 2 to 4, or as a fruitful assessment of rational choice analysis. This is because the interpretation of what is meant by 'rational action' has drastically changed throughout history, as have the problems economists address. This diversity of meaning hinders easy comparison of the different faces of rational choice. However, what this historical reconstruction reveals is a lasting commitment by economists to what I call 'methodological rationalism', i.e., the doctrine that individual behavior can be conceptualized with recourse to some notion of rationality. I conclude with an epilogue on the methodology of philosophy of economics, defending case-study analysis and the method of local critique as a fruitful alternative to traditional methods of appraisal.

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**Catherine Herfeld** obtained her PhD in April 2013 at the economics faculty of Witten/Herdecke University. The dissertation committee consisted of Professor Chrysostomos Mantzavinos (University of Athens and Witten/Herdecke University), and Professor Philip Kitcher (Columbia University). Catherine Herfeld is currently a postdoctoral research fellow at the Munich Center for Mathematical Philosophy at the Ludwig-

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